

## WHAT IS CLAIMED IS

1. A method of treating a subject having Alzheimer's Disease, comprising the step of administering an antibody which is targeted to amyloid  $\beta$  peptide, or to  
5 fragment thereof, thereby treating the subject having Alzheimer's Disease.

2. The method of claim 1, wherein the antibody is directed to amyloid  $\beta$  peptide, or fragment thereof.

10 3. The method of claim 1, wherein the antibody is directed to N-terminus-truncated amyloid  $\beta$  peptide fragment.

4. The method of claim 1, wherein the antibody is directed to C-terminus-truncated amyloid  $\beta$  peptide fragment.

15 5. The method of claim 1, wherein the antibody is directed to the amyloid precursor protein, or fragment thereof.

20 6. The method of claim 1, wherein the antibody is a monoclonal antibody, a humanized antibody, a chimeric antibody, a bispecific antibody, an artificial antibody, a scFv antibody or a F(ab), or fragment thereof.

25 7. A method of treating a subject having a disease or disorder characterized by amyloid beta deposition, comprising the step of administering an antibody which is targeted to amyloid  $\beta$  peptide, or to fragment thereof, thereby treating the subject having disease or disorder characterized by amyloid beta deposition.

8. The method of claim 7, wherein the antibody is directed to amyloid  $\beta$  peptide, or fragment thereof.

30 9. The method of claim 7, wherein the antibody is directed to N-terminus-truncated amyloid  $\beta$  peptide fragment.

10. The method of claim 7, wherein the antibody is directed to C-terminus-truncated amyloid  $\beta$  peptide fragment.

11. The method of claim 7, wherein the antibody is directed to the amyloid precursor protein, or fragment thereof.

12. The method of claim 7, wherein the antibody is a monoclonal antibody, a humanized antibody, a chimeric antibody, a bispecific antibody, an artificial antibody, a scFv antibody or a F(ab), or fragment thereof.

13. The method of claim 7, wherein the disease or disorder characterized by amyloid beta deposition is mild cognitive impairment (MCI), cerebral amyloid angiopathy or congiphylic angiopathy, Alzheimer's disease associated with Down Syndrome, and inclusion-body myositis.and

14. A method for delaying or inhibiting or suppressing the accumulation of an amyloid  $\beta$  peptide or fragment thereof, comprising the step of administering an antibody which is targeted to an amyloid  $\beta$  peptide, or to fragment thereof, thereby delaying or inhibiting or suppressing accumulation of amyloid  $\beta$  peptide or fragment thereof in the brain.

15. The method of claim 14, wherein the antibody is directed to amyloid  $\beta$  peptide, or fragment thereof.

16. The method of claim 14, wherein the antibody is directed to N-terminus-truncated amyloid  $\beta$  peptide fragment.

17. The method of claim 14, wherein the antibody is directed to C-terminus-truncated amyloid  $\beta$  peptide fragment.

18. The method of claim 14, wherein the antibody is directed to the amyloid precursor protein, or fragment thereof.

19. The method of claim 14, wherein the antibody is a monoclonal antibody, a humanized antibody, a chimeric antibody, a bispecific antibody, an artificial antibody, a scFv antibody or a F(ab), or fragment thereof.

20. A method for delaying or inhibiting or suppressing the neurotoxicity of amyloid  $\beta$  peptide or fragment thereof, comprising the step of administering an antibody which is targeted to amyloid  $\beta$  peptide, or fragment thereof, thereby delaying or inhibiting or suppressing the neurotoxicity of amyloid  $\beta$  peptide or fragment thereof.

21. The method of claim 20, wherein the antibody is directed to amyloid  $\beta$  peptide, or fragment thereof.

22. The method of claim 20, wherein the antibody is directed to N-terminus-truncated amyloid  $\beta$  peptide fragment.

23. The method of claim 20, wherein the antibody is directed to C-terminus-truncated amyloid  $\beta$  peptide fragment.

24. The method of claim 20, wherein the antibody is directed to the amyloid precursor protein, or fragment thereof.

25. The method of claim 20, wherein the antibody is a monoclonal antibody, a humanized antibody, a chimeric antibody, a bispecific antibody, an artificial antibody, a scFv antibody or a F(ab), or fragment thereof.

26. An antibody that is free-end specific and is targeted to the free N-terminus of amyloid  $\beta$ -peptide.

27. The antibody of claim 26, wherein the antibody is a monoclonal antibody, a humanized antibody, a chimeric antibody, a bispecific antibody, an artificial antibody, a scFv antibody or a F(ab), or fragment thereof.

28. An antibody that is free-end specific and is targeted to the free N-terminus of amyloid  $\beta$ -peptide, wherein the first amino acid of amyloid  $\beta$ -peptide of said is aspartate.

29. The antibody of claim 28, wherein the antibody is a monoclonal antibody, a humanized antibody, a chimeric antibody, a bispecific antibody, an artificial antibody, a scFv antibody or a F(ab), or fragment thereof.

30. An antibody that is free-end specific and is targeted to the free N terminus of N- and/or C-terminus-truncated amyloid  $\beta$  peptide fragment.

31. The method of claim 30, wherein the antibody is a monoclonal antibody, a humanized antibody, a chimeric antibody, a bispecific antibody, an artificial antibody, a scFv antibody or a F(ab), or fragment thereof.

32. An antibody that is free-end specific and is targeted to the free C-terminus of the amyloid  $\beta$ -peptide A $\beta$ 1-39, A $\beta$ 1-40, A $\beta$ 1-41, or A $\beta$ 1-43.

33. The method of claim 32, wherein the antibody is a monoclonal antibody, a humanized antibody, a chimeric antibody, a bispecific antibody, an artificial antibody, a scFv antibody or a F(ab), or fragment thereof.

34. An antibody that is free-end specific and is targeted to the free C-terminus of N- and/or C-terminus-truncated amyloid  $\beta$  peptide fragment.

35. The antibody of claim 34, wherein the antibody is a monoclonal antibody, a humanized antibody, a chimeric antibody, a bispecific antibody, an artificial antibody, a scFv antibody or a F(ab), or fragment thereof.

36. A single chain or artificial antibody that is free-end specific and is targeted to the free C-terminus of the amyloid  $\beta$ -peptide A $\beta$ 1-42.

37. A pharmaceutical composition comprising an amount of the antibody of claim 26 and a pharmaceutical acceptable carrier.

38. The pharmaceutical composition of claim 37, wherein the composition is administered subcutaneously, intravenously, intradermally, intramuscularly, intraperitoneally, intracerebrally, intranasally, orally, transdermally, buccally, intra-arterially, intracranially, or intracephalically.

39. A pharmaceutical composition comprising an amount of the antibody of claim 28 and a pharmaceutical acceptable carrier.

40. The pharmaceutical composition of claim 39, wherein the composition is administered subcutaneously, intravenously, intradermally, intramuscularly, intraperitoneally, intracerebrally, intranasally, orally, transdermally, buccally, intra-arterially, intracranially, or intracephalically.

41. A pharmaceutical composition comprising an amount of the antibody of claim 30 and a pharmaceutical acceptable carrier.

42. The pharmaceutical composition of claim 41, wherein the composition is administered subcutaneously, intravenously, intradermally, intramuscularly, intraperitoneally, intracerebrally, intranasally, orally, transdermally, buccally, intra-arterially, intracranially, or intracephalically.

43. A pharmaceutical composition comprising an amount of the antibody of claim 32 and a pharmaceutical acceptable carrier.

44. The pharmaceutical composition of claim 43, wherein the composition is administered subcutaneously, intravenously, intradermally, intramuscularly, intraperitoneally, intracerebrally, intranasally, orally, transdermally, buccally, intra-arterially, intracranially, or intracephalically.

45. A pharmaceutical composition comprising an amount of the antibody of claim 34 and a pharmaceutical acceptable carrier.

46. The pharmaceutical composition of claim 45, wherein the composition is administered subcutaneously, intravenously, intradermally, intramuscularly, intraperitoneally, intracerebrally, intranasally, orally, transdermally, buccally,  
5 intra-arterially, intracranially, or intracephalically.

47. A pharmaceutical composition comprising an amount of the antibody of claim 36 and a pharmaceutical acceptable carrier.

10 48. The pharmaceutical composition of claim 47, wherein the composition is administered subcutaneously, intravenously, intradermally, intramuscularly, intraperitoneally, intracerebrally, intranasally, orally, transdermally, buccally, intra-arterially, intracranially, or intracephalically.

15 49. A method of treating a subject having Alzheimer's Disease, comprising the step of administering the antibody of claim 26, thereby treating the subject having Alzheimer's Disease.

20 50. A method of treating a subject having a disease or disorder characterized by amyloid beta deposition comprising the step of administering the antibody of claim 26, thereby treating the subject having a disease or disorder characterized by amyloid beta deposition.

25 51. A method for delaying or inhibiting or suppressing the accumulation of an amyloid  $\beta$  peptide or fragment thereof, comprising the step of administering the antibody of claim 26, thereby delaying or inhibiting or suppressing accumulation of amyloid  $\beta$  peptide or fragment thereof in the brain.

30 52. A method for delaying or inhibiting or suppressing the neurotoxicity of amyloid  $\beta$  peptide or fragment thereof, comprising the step of administering the antibody of claim 26, thereby delaying or inhibiting or suppressing the neurotoxicity of amyloid  $\beta$  peptide or fragment thereof.

53. A method of treating a subject having Alzheimer's Disease, comprising the step of administering the antibody of claim 28, thereby treating the subject having Alzheimer's Disease.

5 54. A method of treating a subject having a disease or disorder characterized by amyloid beta deposition comprising the step of administering the antibody of claim 28, thereby treating the subject having a disease or disorder characterized by amyloid beta deposition.

10 55. A method for delaying or inhibiting or suppressing the accumulation of an amyloid  $\beta$  peptide or fragment thereof, comprising the step of administering the antibody of claim 28, thereby delaying or inhibiting or suppressing accumulation of amyloid  $\beta$  peptide or fragment thereof in the brain.

15 56. A method for delaying or inhibiting or suppressing the neurotoxicity of amyloid  $\beta$  peptide or fragment thereof, comprising the step of administering the antibody of claim 28, thereby delaying or inhibiting or suppressing the neurotoxicity of amyloid  $\beta$  peptide or fragment thereof.

20 57. A method of treating a subject having Alzheimer's Disease, comprising the step of administering the antibody of claim 30, thereby treating the subject having Alzheimer's Disease.

25 58. A method of treating a subject having a disease or disorder characterized by amyloid beta deposition comprising the step of administering the antibody of claim 30, thereby treating the subject having a disease or disorder characterized by amyloid beta deposition.

30 59. A method for delaying or inhibiting or suppressing the accumulation of an amyloid  $\beta$  peptide or fragment thereof, comprising the step of administering the antibody of claim 30, thereby delaying or inhibiting or suppressing accumulation of amyloid  $\beta$  peptide or fragment thereof in the brain.

60. A method for delaying or inhibiting or suppressing the neurotoxicity of amyloid  $\beta$  peptide or fragment thereof, comprising the step of administering the antibody of claim 30, thereby delaying or inhibiting or suppressing the neurotoxicity of amyloid  $\beta$  peptide or fragment thereof.

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61. A method of treating a subject having Alzheimer's Disease, comprising the step of administering the antibody of claim 32, thereby treating the subject having Alzheimer's Disease.

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62. A method of treating a subject having a disease or disorder characterized by amyloid beta deposition comprising the step of administering the antibody of claim 32, thereby treating the subject having a disease or disorder characterized by amyloid beta deposition.

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63. A method for delaying or inhibiting or suppressing the accumulation of an amyloid  $\beta$  peptide or fragment thereof, comprising the step of administering the antibody of claim 32, thereby delaying or inhibiting or suppressing accumulation of amyloid  $\beta$  peptide or fragment thereof in the brain.

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64. A method for delaying or inhibiting or suppressing the neurotoxicity of amyloid  $\beta$  peptide or fragment thereof, comprising the step of administering the antibody of claim 32, thereby delaying or inhibiting or suppressing the neurotoxicity of amyloid  $\beta$  peptide or fragment thereof.

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65. A method of treating subject having Alzheimer's Disease, comprising the step of administering the antibody of claim 34, thereby treating the subject having Alzheimer's Disease.

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66. A method of treating a subject having a disease or disorder characterized by amyloid beta deposition comprising the step of administering the antibody of claim 34, thereby treating the subject having a disease or disorder characterized by amyloid beta deposition.



67. A method for delaying or inhibiting or suppressing the accumulation of an amyloid  $\beta$  peptide or fragment thereof, comprising the step of administering the antibody of claim 34, thereby delaying or inhibiting or suppressing accumulation of amyloid  $\beta$  peptide or fragment thereof in the brain.

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68. A method for delaying or inhibiting or suppressing the neurotoxicity of amyloid  $\beta$  peptide or fragment thereof, comprising the step of administering the antibody of claim 34, thereby delaying or inhibiting or suppressing the neurotoxicity of amyloid  $\beta$  peptide or fragment thereof.

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69. A method of treating a subject having Alzheimer's Disease, and/or of treating a subject having other disease or disorder characterized by amyloid  $\beta$  deposition, comprising the step of administering the antibody of claim 36, thereby treating the subject having Alzheimer's Disease.

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70. A method of treating a subject having a disease or disorder characterized by amyloid beta deposition comprising the step of administering the antibody of claim 36, thereby treating the subject having a disease or disorder characterized by amyloid beta deposition.

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71. A method for delaying or inhibiting or suppressing the accumulation of an amyloid  $\beta$  peptide or fragment thereof, comprising the step of administering the antibody of claim 36, thereby delaying or inhibiting or suppressing accumulation of amyloid  $\beta$  peptide or fragment thereof in the brain.

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72. A method for delaying or inhibiting or suppressing the neurotoxicity of amyloid  $\beta$  peptide or fragment thereof, comprising the step of administering the antibody of claim 36, thereby delaying or inhibiting or suppressing the neurotoxicity of amyloid  $\beta$  peptide or fragment thereof.

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